

REMARKS

Claims 11-30 are pending. Claims 11-19, 21, and 24-30 are rejected under 35 USC 102(b) as being anticipated by US patent 5,727,051 (Hollender et al.). Claims 20 and 22-23 are rejected under 35 USC 103(a) as being unpatentable over US patent 5,727,051 (Hollender) in view of US patent 6,788,646 (Fodor et al.).

No amendments are made herein. Claims 11-30 are presented for examination. Claims 11, 26, and 28 are independent.

Response to rejections under 35 USC 102(b) vs. Hollender:

1) Regarding claims 11, 26, and 28: Hollender '051 uses Asynchronous Transfer Mode (ATM) network technology. This is clear from the title of the priority document (listed in Hollender '051 at col. 1, lines 9-10), and as described throughout Hollender '051 ("*ATM System Concepts*", col. 5 line 16 to col. 8 line 15 and "*Deployment of ATM in Telecommunications Networks*", col. 8 line 17 to col. 10 line 35). This is exactly the kind of network technology that is overcome by Applicants' invention (Applicants' par. 5, especially line 9). The invention of Hollender is a dimensioning tool for an ATM network.

2) Distinction between the methods of Hollender and Applicants can be seen for example in Hollender's FIG 17, in which several specific virtual paths  $VP_1$ - $VP_{10}$  are defined among nodes 1-10. Each virtual path is an explicit path that requires physical links. It is explicit because there is no ambiguity -- every node and link in the path is defined for each path  $VP_n$ . Two paths,  $VP_1$  and  $VP_2$ , connect node 1 to node 4 in the same direction. These two paths  $VP_1$  and  $VP_2$  are specifically different from each other because they use different physical nodes and links. There is no virtual path directly between nodes 2 and 5, because there is no direct physical link between nodes 2 and 5 (FIG 16). Each explicit path  $VP_n$  of Hollender is defined, modeled, optimized, and allocated (FIG 9).

In Applicants' invention, this is not done. Applicants' method would consider Hollender's node-1 => node-4 as one pair, no matter what path is taken -- whether  $VP_1$  or  $VP_2$  or any other path, such a path through nodes 1 => 2 => 6 => 5 => 4. Thus, for the node-1 => node-4 pair,

Applicants' method would cut optimization iterations in half compared to Hollender's VP<sub>1</sub> and VP<sub>2</sub>, while at the same time allowing all other paths, such as 1 => 2 => 6 => 5 => 4. Thus, Applicants' method is simpler, faster, and more flexible than Hollender's method.

3) Hollender's method is based on defining, optimizing, and allocating explicit paths (VPs of FIGs 9, 17). Thus it reserves explicit paths, and does not meet the present independent claims 11, 26, and 28.

4) In the Office Action page 3, lines 7-9, Examiner cites Hollender's steps 908-911. However, these steps are unrelated to the present invention, which does not remove Virtual Paths. There is no need to do so in Applicants' network, because there are no path reservations to be removed.

5) Hollender's step 905 does not meet Applicants' limitation: *"increasing the threshold values of all pairs of marginal nodes step-by-step until congestion occurs on at least one pair of marginal nodes"*. Instead of increasing threshold values step-by-step, Hollender uses an entropy rate function to set a new target (col. 12 lines 47-53). This is a central aspect of Hollender's invention. It is described at length in his patent, and is much more complicated than Applicants' step-by-step method.

6) Regarding claim 26: Hollender's step 907 (FIG 9) states: *"readjust or reallocate the capacities of all VPs spanning the physical link"*. This is not the same as Applicants' step of *"reducing the threshold value on the at least one pair of marginal nodes to the threshold value at the step before the congestions occurred"*. Hollender's *"readjust or reallocate capacities"* means allocating or reallocating physical capacity on a physical link (col. 12, lines 54-64), not reducing a threshold value on a pair of marginal nodes. Applicants' method is simpler, faster, and more flexible, as previously argued.

7) Regarding claim 28: Hollender's step 907 (FIG 9) states: *"readjust or reallocate the capacities of all VPs spanning the physical link"*. This is not the same as Applicants' step of *"reducing the limit value on each of the overloaded marginal nodes to the limit value at the*

*step prior to the first overload".* Hollender's "*readjust or reallocate capacities*" means allocating or reallocating physical capacity on a physical link (col. 12, lines 54-64), not reducing a limit value on each pair of marginal nodes. Applicants' method is simpler, faster, and more flexible, as previously argued.

8) Further regarding claim 28: Hollender describes step 907 in col. 12, lines 59-62 as follows: "*Capacity can be added to VPs by the allocation of unallocated physical capacity or by reallocation of already allocated capacity from a less productive VP to a more productive VP.*" This teaches away from Applicants' limitation "*not reducing the limit value on the remaining non-overloaded pairs of marginal node*", and further illustrates the distinction of explicit reserved paths (VPs) in Hollender versus no explicit reserved paths as claimed.

Response to rejections under 35 USC 103(a):

9) Fodor does not address the above issues, so the proposed combination does not meet the limitations of any claims herein.

(Please proceed to the next page.)

Conclusion

For anticipation under 35 USC 102, a reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present (MPEP 706.02(a) IV). The identical invention must be shown in as complete detail as recited in the claim, and the elements must be arranged as required by the claim (MPEP 2131). These criteria are not met for the independent claims as argued above. Accordingly, Applicants request withdrawal of the 35 USC 102 rejections.

M.P.E.P. 2143.03 provides that to establish prima facie obviousness of a claimed invention, all words in a claim must be considered in judging the patentability of that claim against the prior art. Fodor does not address the argued deficiencies of Hollender, so the proposed combination does not meet the limitations of any claims herein. Applicants feel this application is in condition for allowance, which is respectfully requested.

The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including fees for additional claims and terminal disclaimer fee, or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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